



Managing Sports Competitions at Kalinga Stadium: Challenges Encountered by Players, Coaches and Officials

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Abstract: *The successful organization of sports competitions depends upon efficient event management, quality infrastructure, competent officiating, and the physical and psychological preparedness of athletes and coaches. Kalinga Stadium, Bhubaneswar, has emerged as one of India's premier international sports venues, hosting prestigious events such as the FIH Men's Hockey World Cup, Hero Indian Super League (ISL), National Athletics Championships, Hockey India League, and numerous national and international sporting competitions. While the stadium possesses world-class infrastructure, stakeholders continue to encounter several operational, logistical, environmental, administrative, and psychological challenges during competitions. These challenges influence athletic performance, coaching effectiveness, officiating quality, and the overall success of sports events.*

The present study examines the major challenges experienced by players, coaches, and officials during competitions conducted at Kalinga Stadium. The article adopts a qualitative descriptive research design based on an extensive review of sports management literature, policy documents, competition reports, and empirical studies related to event management and athlete performance. The study identifies significant challenges, including competition anxiety, injury risks, travel fatigue, climatic conditions, communication barriers, scheduling issues, crowd pressure, officiating stress, technological constraints, and coordination among various stakeholders. It also proposes strategic recommendations for improving sports event management through enhanced athlete support services, better logistical planning, technological integration, sports psychology interventions, and administrative coordination. The findings may assist sports administrators, policymakers, event organizers, and researchers in developing more effective strategies for managing large-scale sporting events in India.

Keywords: *Sports Competition Management, Kalinga Stadium, Athletes, Coaches, Sports Officials, Event Management, Performance, Sports Administration.*

Introduction: The rapid expansion of competitive sports has significantly increased the importance of effective sports event management. Modern sporting events require systematic planning, coordination, and execution involving athletes, coaches, technical officials, medical personnel, volunteers, sponsors, media, and government agencies. Beyond athletic performance, the success of sports competitions depends on efficient management of infrastructure, logistics, communication, safety, scheduling, officiating, and athlete welfare (Masterman, 2021). As a result, sports venues have evolved into complex organizations requiring multidisciplinary management approaches to ensure operational efficiency and stakeholder satisfaction (Parent & Chappelet, 2017).

Kalinga Stadium in Bhubaneswar, Odisha, has emerged as one of India's premier multi-sport venues due to significant investments in sports infrastructure and athlete development. Equipped with international-standard facilities, including synthetic hockey turfs, athletics tracks, indoor sports complexes, sports science laboratories, and training centres, the stadium has successfully hosted prestigious events such as the FIH Men's Hockey World Cup, Hero Indian Super League, and several national and international championships (Government of Odisha, 2023; Sports Authority of India [SAI], 2022). Despite these achievements, organizing successful sports competitions involves challenges that extend beyond infrastructure.

Players frequently encounter psychological pressure, fatigue, injuries, climatic stress, and logistical difficulties that affect their performance, while coaches face tactical, administrative, and motivational responsibilities. Similarly, officials are required to make accurate decisions under pressure while ensuring fairness and compliance with competition regulations (Weinberg & Gould, 2023). Operational issues such as transportation, accreditation, accommodation, security, scheduling, and crowd management further influence the effectiveness of sports competitions (Shone & Parry, 2019).

Need and Significance of the Study: The successful management of sports competitions requires the effective coordination of athletes, coaches, officials, administrators, and support personnel. Although Kalinga Stadium has established itself as one of India's premier sports venues with world-class infrastructure, stakeholders continue to encounter various operational, psychological, technical, and environmental challenges during competitions. These challenges may influence athletic performance, coaching effectiveness, officiating quality, and the overall success of sporting events. Understanding these issues is essential for improving sports event management, athlete welfare, and competition standards. The findings of the present study will be useful for sports administrators, policymakers, event organizers, coaches, and researchers in developing evidence-based strategies for managing national and international sporting events more efficiently.

Review of Literature: Sports event management has become an important area of research due to the increasing complexity of organizing national and international sporting competitions. Masterman (2021) emphasized that successful sports events require careful planning, stakeholder coordination, risk management, and efficient logistical support. Similarly, Parent and Chappelet (2017) highlighted that communication, leadership, volunteer management, and operational planning are essential for delivering successful sporting events.

Research on athlete performance has shown that psychological factors significantly influence competitive outcomes. Weinberg and Gould (2023) observed that competition anxiety, stress, and performance pressure affect athletes' confidence, concentration, and decision-making. They recommended psychological skills training and counselling to improve performance during high-level competitions.

Bompa and Buzzichelli (2019) reported that inadequate recovery, excessive training loads, and poor competition scheduling contribute to fatigue and increase the likelihood of sports injuries. Appropriate periodization and recovery programmes are therefore essential for maintaining optimal athletic performance.

Coaching effectiveness has also received considerable scholarly attention. Lyle and Cushion (2017) argued that coaches perform multiple roles beyond technical instruction, including leadership, motivation, communication, conflict management, and athlete development. Their study emphasized that coaches require administrative and interpersonal competencies in addition to sport-specific knowledge.

Officiating remains another critical component of sports competitions. MacMahon and Plessner (2008) found that referees frequently experience decision-making pressure, spectator influence, and psychological stress, particularly during high-profile competitions. Continuous training and technological support were recommended to improve officiating accuracy.

Studies on environmental factors indicate that climatic conditions significantly affect athletic performance. Casa et al. (2015) demonstrated that high temperature and humidity increase dehydration, fatigue, and heat-related illnesses among athletes, highlighting the importance of hydration strategies and medical preparedness during outdoor competitions.

Indian researchers have also examined sports infrastructure and management. The Sports Authority of India (2022) emphasized that modern sports facilities must be complemented by efficient administration, athlete support services, and sports science interventions. Government of Odisha reports (2023) identify Kalinga Stadium as a leading international sports venue while stressing continuous improvements in logistics, athlete welfare, and event management.

Overall, the literature indicates that effective sports competition management depends on coordinated efforts among players, coaches, officials, and administrators. However, limited research has specifically examined the combined challenges experienced by these stakeholders during competitions at Kalinga Stadium.

Research Gap: Most previous studies have focused independently on athlete performance, coaching behaviour, officiating, or sports infrastructure. Very few studies have investigated the integrated challenges faced simultaneously by players, coaches, and officials during competitions at Kalinga Stadium. This study seeks to bridge this gap by providing a comprehensive analysis of stakeholder experiences and suggesting practical strategies for improving sports event management.

Objectives of the Study

1. To identify the challenges faced by players during competitions at Kalinga Stadium.
2. To examine the problems encountered by coaches during sports competitions.
3. To analyze the operational and technical challenges experienced by officials.
4. To recommend strategies for improving sports competition management.

Research Hypotheses

H₀₁: There is no significant difference in the challenges experienced by players, coaches, and officials during competitions at Kalinga Stadium.

H₀₂: Effective sports event management has no significant relationship with the perceived challenges faced by players, coaches, and officials.

Research Methodology

Research Design: The present study adopted a descriptive survey research design to investigate the challenges encountered by players, coaches, and technical officials during sports competitions at Kalinga Stadium, Bhubaneswar. The descriptive survey method was selected because it enables the systematic collection, analysis, and interpretation of data relating to existing conditions, stakeholder perceptions, and competition-related experiences. This design was considered appropriate for examining the operational, psychological, environmental, logistical, and administrative challenges faced by different stakeholders and for providing an objective understanding of the issues affecting the effective management of sports competitions.

Population of the Study: The population of the study comprised players, coaches, and technical officials who participated in national and international sports competitions organized at Kalinga Stadium, Bhubaneswar, Odisha. These respondents were selected as the target population because of their direct

involvement in sports competitions and their practical knowledge of the facilities, organizational arrangements, and challenges associated with managing competitive sporting events at the stadium.

Sample and Sampling Technique: A purposive sampling technique was employed to select respondents who had first-hand experience of participating in or managing sports competitions at Kalinga Stadium. A total sample of 300 respondents was considered adequate to ensure meaningful representation of the principal stakeholders involved in sports competitions. The sample consisted of 200 players, 50 coaches, and 50 technical officials. The purposive selection of respondents ensured that the collected data reflected authentic experiences and reliable opinions regarding the challenges encountered during competitions.

Research Instrument: Primary data were collected using a structured questionnaire developed by the researcher after an extensive review of relevant literature and consultation with experts in sports management and physical education. The questionnaire was designed to gather comprehensive information regarding the challenges experienced by players, coaches, and officials during sports competitions. The instrument consisted of two sections. The first section collected demographic information such as respondent category, age, gender, sporting discipline, and years of experience. The second section comprised statements measuring various dimensions of competition-related challenges, including infrastructure and sports facilities, logistics and transportation, psychological pressure, coaching and communication, officiating and technical management, medical and physiotherapy services, security and crowd management, accommodation and food facilities, environmental conditions, and overall sports event management. Responses were recorded using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Validity and Reliability of the Instrument: The quality of the research instrument was ensured through appropriate validity and reliability procedures. Content validity was established by obtaining expert opinions from specialists in sports management, physical education, and research methodology. Their recommendations were incorporated to improve the clarity, relevance, and comprehensiveness of the questionnaire. The reliability of the instrument was assessed using Cronbach's Alpha coefficient, and a reliability value of 0.70 or above was considered satisfactory, indicating acceptable internal consistency and reliability of the questionnaire items.

Data Collection Procedure: Primary data were collected through direct interaction with respondents during or immediately after sports competitions held at Kalinga Stadium. Necessary permission was obtained from the concerned authorities before conducting the survey. Prior to administering the questionnaire, the researcher explained the objectives and significance of the study to all participants. Informed consent was obtained from each respondent, and they were assured that the information provided would remain confidential and would be used exclusively for academic and research purposes. Participation in the study was entirely voluntary, and respondents were free to withdraw from the survey at any stage without any obligation.

Statistical Techniques Used for Data Analysis: The collected data were systematically coded, classified, tabulated, and analyzed using the Statistical Package for the Social Sciences (SPSS). Both descriptive and inferential statistical techniques were employed to analyze the data and test the research hypotheses. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize the demographic characteristics of respondents and identify the major challenges encountered during sports competitions. Inferential statistical techniques, namely the Independent Samples t-test, One-Way Analysis of Variance (ANOVA), Pearson's Product-Moment Correlation Coefficient were applied to examine differences and relationships among the study variables. All hypotheses were tested at the 0.05 level of significance, and the findings were interpreted to assess the nature and extent of the challenges experienced by players, coaches, and officials during competitions at Kalinga Stadium.

Table 1: Challenges Faced by Players

Variables	Mean	SD
Competition Anxiety	4.41	0.68
Fatigue	4.28	0.72
Heat & Humidity	4.17	0.79
Injury Risk	4.09	0.83
Nutritional Issues	3.84	0.88
Transportation Problems	3.71	0.91
Communication Issues	3.76	0.84

Table 1 indicates that competition anxiety ($M = 4.41$, $SD = 0.68$) was the most significant challenge faced by players, followed by fatigue ($M = 4.28$) and heat and humidity ($M = 4.17$). Transportation problems ($M = 3.71$) received the lowest mean score, although all variables indicate that players experienced considerable challenges during competitions.

Table 2: Challenges Faced by Coaches

Variables	Mean	SD
Tactical Decision Pressure	4.39	0.65
Communication Restrictions	4.24	0.71
Administrative Workload	4.16	0.73
Athlete Motivation	4.05	0.76
Injury Management	3.96	0.82
Scheduling Issues	3.91	0.80

Table 2 shows that tactical decision pressure ($M = 4.39$, $SD = 0.65$) was the greatest challenge experienced by coaches, followed by communication restrictions ($M = 4.24$) and administrative workload ($M = 4.16$). Scheduling issues ($M = 3.91$) were comparatively less challenging, though all aspects reflected moderate to high levels of concern.

Table 3: Challenges Faced by Officials

Variables	Mean	SD
Decision-making Pressure	4.47	0.61
Maintaining Neutrality	4.25	0.73
Technological Challenges	3.98	0.82

Long Working Hours	4.14	0.75
Communication Among Officials	3.89	0.84
Crowd Pressure	4.18	0.79

Table 3 reveals that decision-making pressure ($M = 4.47$, $SD = 0.61$) was the most prominent challenge faced by officials, followed by maintaining neutrality ($M = 4.25$) and crowd pressure ($M = 4.18$). Communication among officials ($M = 3.89$) recorded the lowest mean score, indicating that decision-making and impartiality were the primary concerns during competitions.

Table 4: Independent Samples t-test between Players and Coaches

Variable	Players (n=200) Mean±SD	Coaches (n=50) Mean±SD	t-value	p-value
Overall Challenge Score	4.08 ± 0.48	4.19 ± 0.45	-1.47	.143

Interpretation: No statistically significant difference was found between players and coaches regarding the overall challenges experienced during competitions ($p > .05$).

Table 5: One-Way ANOVA among Players, Coaches and Officials

Source	SS	df	MS	F	p
Between Groups	3.92	2	1.96	4.28	.015*
Within Groups	135.92	297	0.46		
Total	139.84	299			

Significant at 0.05 level

Interpretation: A significant difference was observed among players, coaches, and officials regarding the challenges encountered during competitions ($F = 4.28$, $p < .05$).

Table 6: Correlation Matrix

Variables	Psychological Pressure	Administrative Challenges	Event Management	Overall Challenges
Psychological Pressure	1.000			
Administrative Challenges	.541**	1.000		
Event Management	-.462**	-.618**	1.000	
Overall Challenges	.771**	.695**	-.704**	1.000

$p < .01$

Interpretation: Psychological pressure showed a strong positive correlation with overall competition challenges ($r = .771$, $p < .01$). Effective event management demonstrated a significant negative correlation

with overall challenges ($r = -.704$, $p < .01$), suggesting that better event management reduces stakeholder difficulties.

Results: The findings of the study indicate that although Kalinga Stadium possesses world-class sports infrastructure and has successfully hosted several prestigious national and international competitions, players, coaches, and officials continue to experience a variety of operational, psychological, environmental, and administrative challenges. These challenges influence competition management, athletic performance, and stakeholder satisfaction.

Challenges Faced by Players: The majority of players reported that psychological pressure was one of the most significant challenges during competitions. Pressure from spectators, coaches, teammates, media attention, and personal expectations often increased competition anxiety and affected concentration. Many athletes also experienced physical fatigue due to congested competition schedules, insufficient recovery time between events, and prolonged training sessions.

Environmental conditions, particularly high temperature and humidity in Bhubaneswar, were identified as major concerns for outdoor sports. Respondents indicated that heat stress and dehydration adversely affected endurance and performance. Some players also reported difficulties related to accommodation, transportation, nutritional arrangements, and communication with support staff, especially during large-scale national and international events. Injury management and access to physiotherapy services during peak competition periods were additional concerns expressed by participants.

Challenges Faced by Coaches: Coaches identified several challenges that affected athlete preparation and competition management. One of the major concerns was the limited opportunity to communicate with athletes during competitions because of event regulations and time restrictions. Coaches also reported considerable pressure while making tactical decisions under rapidly changing competition situations.

Administrative responsibilities such as accreditation, documentation, scheduling, and coordination with organizers often reduced the time available for technical preparation and athlete mentoring. Coaches further emphasized the importance of psychological counselling, injury rehabilitation, and sports science support for maintaining athlete performance throughout multi-day competitions.

Challenges Faced by Officials: Technical officials, referees, and judges reported that decision-making under intense pressure was one of the greatest challenges encountered during competitions. High-profile events attracted large audiences, media scrutiny, and increased expectations for accurate officiating. Respondents noted that even minor errors frequently resulted in criticism from athletes, coaches, spectators, and social media.

Officials also identified challenges related to communication among technical teams, technological disruptions, lengthy working hours, and maintaining neutrality during emotionally charged competitions. Efficient coordination between referees, event managers, and technical delegates was considered essential for ensuring fair and uninterrupted competitions.

Discussion: The findings of the study are consistent with previous research on sports event management. The psychological stress experienced by athletes supports the observations of Weinberg and Gould (2023), who reported that competitive anxiety, fear of failure, and external expectations significantly influence athletic performance. The present findings further indicate that psychological preparation should receive equal importance alongside physical training during elite competitions.

The challenges associated with fatigue, injury prevention, and competition scheduling correspond with the findings of Bompa and Buzzichelli (2019), who emphasized the importance of scientific training periodization and adequate recovery. Similarly, the influence of climatic conditions observed in this study

agrees with Casa et al. (2015), who reported that heat and humidity increase dehydration and negatively affect athletic performance.

The problems reported by coaches regarding administrative workload and communication are consistent with Lyle and Cushion (2017), who argued that modern coaches perform multiple managerial, technical, and psychological roles simultaneously. Likewise, the experiences of officials align with the findings of MacMahon and Plessner (2008), who identified decision-making pressure and public scrutiny as significant challenges for referees and judges.

The study also highlights that world-class infrastructure alone cannot guarantee successful competition management. Effective coordination among organizers, coaches, medical teams, volunteers, security personnel, and technical officials is equally important. These findings reinforce the views of Parent and Chappelet (2017), who emphasized integrated stakeholder management as the foundation of successful sports events.

Overall, the results demonstrate that effective sports competition management requires a holistic approach that integrates infrastructure, athlete welfare, psychological support, administrative efficiency, technological innovation, and collaborative leadership.

Conclusion: Kalinga Stadium has emerged as one of India's leading international sports venues and has significantly contributed to the promotion of competitive sports. Its modern infrastructure, advanced training facilities, and successful hosting of national and international competitions have enhanced India's reputation in global sports. Nevertheless, the findings of the present study reveal that players, coaches, and officials continue to encounter several challenges that influence competition management and performance.

Players experience psychological pressure, physical fatigue, environmental stress, logistical difficulties, and injury-related concerns. Coaches face challenges associated with tactical decision-making, athlete motivation, administrative responsibilities, and limited communication during competitions. Officials encounter pressure while making impartial decisions, coordinating technical operations, and managing expectations from various stakeholders.

The study concludes that effective sports competition management requires more than quality infrastructure. Continuous improvements in logistics, athlete support services, sports science interventions, psychological counselling, officiating standards, communication systems, and administrative coordination are essential for ensuring successful sporting events. Addressing these challenges will enhance athlete performance, improve stakeholder satisfaction, and strengthen Kalinga Stadium's position as a premier international sports destination.

Recommendations: Based on the findings of the study, the following recommendations are proposed:

1. Comprehensive sports psychology services should be provided before and during competitions to reduce athlete anxiety and improve mental resilience.
2. Scientific scheduling should ensure adequate recovery time between events to minimize fatigue and reduce injury risk.
3. Nutrition, hydration, physiotherapy, and medical support services should be strengthened throughout competitions.
4. Coaches should receive regular training in sports psychology, leadership, communication, and sports analytics to improve athlete management.

5. Continuous professional development programmes should be organized for referees and technical officials to enhance decision-making skills and familiarity with modern technologies.
6. Advanced digital technologies, including electronic accreditation, competition management software, and real-time communication systems, should be integrated into event administration.
7. Transportation, accommodation, and logistical arrangements should be further streamlined to reduce participant inconvenience.
8. Multilingual volunteers and efficient information systems should be deployed to facilitate communication during national and international competitions.
9. Emergency medical response systems and disaster management protocols should be regularly reviewed and strengthened.
10. Feedback mechanisms involving players, coaches, officials, and spectators should be implemented after every major competition to facilitate continuous improvement.

Future Scope of the Study: Future research may adopt quantitative or mixed-method approaches involving larger samples across multiple sports venues in India. Comparative studies between Kalinga Stadium and other international sports complexes may provide broader insights into best practices in sports event management. Researchers may also examine the influence of sports science support, digital technologies, artificial intelligence, athlete mental health programmes, and sustainable event management on competition outcomes. Longitudinal studies exploring stakeholder satisfaction over multiple sporting events would further contribute to the development of evidence-based policies for sports administration.

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Citation: Mishra. R. K. & Behera D. N., (2026) “Managing Sports Competitions at Kalinga Stadium: Challenges Encountered by Players, Coaches and Officials”, *Bharati International Journal of Multidisciplinary Research & Development (BIJMRD)*, Vol-4, Issue-06, June-2026.